

PRODUCT DATASHEET

ES-SM-A01-130D-T9P55NM-2000W-011

AC Servo Motors

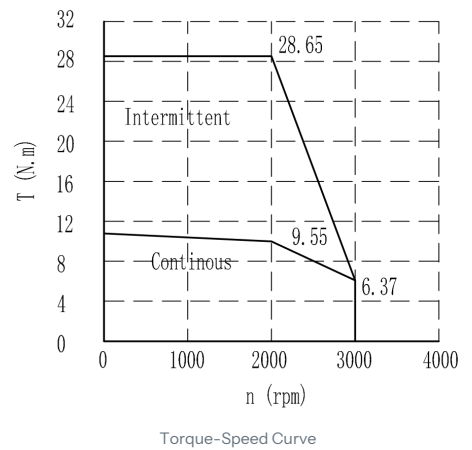
AC Servo Motors | ES-SM-A01-130D Standard 130 mm AC Servo Motor Series

Product Overview

AC Servo Motors with rated Torque 9.55 N·m, instantaneous Maximum Torque 28.65 N·m and rated Speed 2000 rpm.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	9.55	N·m
Instantaneous Maximum Torque	28.65	N·m
Rated Speed	2000	rpm
Continuous Rated Output Power	2000	W
Instantaneous Maximum Current	15 ref.)	A
Flange Size	130	mm
Torque Constant	2.1	N·m/A
Rated Voltage	560	V AC
Rated Line Voltage	560	V



Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Torque	9.55	Nm
Instantaneous Maximum Torque	28.65	Nm
Rated Speed	2000	rpm
Continuous Rated Output Power	2000	W
Torque Constant	2.1	Nm/A
Bearing Axial Force	392	N
Bearing Radial Force	980	N
Rated Power	2000	W
ELECTRICAL		
Rated Voltage	560	V AC
Rated Line Voltage	560	V
Instantaneous Maximum Current	15 ref.)	A
Back EMF Constant	126.5 ref.)	V/krpm
Insulation Class	F	
Motor Outlet Mode	HFO21 + HFO18 aviation connectors	
Pole Pairs	5	

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
ELECTRICAL			
Rated Current	4.75 ref.)	A	
Maximum Allowed Voltage Slew Rate	12	KV/ μ s	
Rotational Back-EMF Constant	126.5 ref.)	V/krpm	
Electrical Time Constant	9.69	ms	
Position Feedback Device	Single-turn communication optical encoder		
MECHANICAL			
Flange Size	130	mm	
Inertia Level	Medium inertia		
Holding Brake Available	With holding brake		
Mechanical Time Constant	1.61 / 1.53	ms	Brake Configuration: without_brake
Rotor Inertia	21.25 kg $\cdot$ cm ² / 20.25 Kg $\cdot$ cm ²		Brake Configuration: without_brake
Bearing Radial Force Capacity	980	N	
Bearing Axial Force Capacity	392	N	
ENVIRONMENTAL			
Altitude and Derating Rule	Maximum altitude 4000 m; above 1000 m, power derates 1.5% per 100 m		
Operating Environment	Keep away from corrosive or flammable gases, oil droplets and dust		
Operating Humidity	$\leq$ 90% RH, non-condensing		

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Key length	Key length 40 mm
	Key width	Key width 6 mm
	Key end width	Key end width 6 mm
	Feature label	Feature identified as KEY
Mechanical View 3	Mounting hole pitch circle diameter	Diameter 145 ±0.2
	Mounting hole quantity and diameter	4 holes, diameter 9
	Mounting hole angular spacing	45 degrees on each side of vertical centerline
	Square flange side length	Square 130

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 4	Component label 1	Label 1
	Component label 2	Label 2
	Key identification label	Key
	Keyway related height dimension	24.5 mm with tolerance +0/-0.2
	Keyway or key width	5 mm
	Shaft diameter	Diameter 22 mm with tolerance +0/-0.013
	Motor body outside diameter	Diameter 110 mm with tolerance +0/-0.035
	Shaft end tapped hole	C M6 L18
	Reference step length	5.5 mm reference
	Reference end length	13.5 mm reference
	Motor body overall length	239.5 mm ± 1.5
	Shaft extension length	55 mm ± 1

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01 Specifications are subject to change without notice. Verify the current product configuration before final design release.

02 2D drawings, CAD files and integration documentation are controlled documents and are supplied separately on request.